

CLAIMS

1. A speaker assembly, comprising:

a speaker housing having a closed top wall and an opposed open end;

a first sound source mounted within the speaker housing, wherein a first cover member is

5 positioned over at least a portion of the first sound source to thereby alter the frequency response of the first sound source and the first cover member is a first support housing secured to the closed top wall of the speaker housing and the first sound source is positioned between the first support housing and the closed top wall;

a second sound source mounted within the speaker housing, wherein a second cover member is positioned over at least a portion of the second sound source to thereby alter the frequency response of the second sound source and the second cover member is a second support housing secured to the closed top wall of the speaker housing and the second sound source is positioned between the second support housing and the closed top wall.

15 2. The speaker assembly according to claim 1, wherein the first cover member is an acoustic sheet covering the first sound source and the second cover member is an acoustic sheet covering the second sound source.

3. The speaker assembly according to claim 1, wherein the first sound source is a midrange
20 driver and the second sound source is a midrange driver.

4. The speaker assembly according to claim 3, further including a first tweeter positioned adjacent the first sound source and a second tweeter positioned adjacent the second sound source, the first tweeter and the second tweeter are outwardly mounted in opposition to generate a stereo image, wherein the first cover member alters the frequency response of the first sound source in a manner creating a physical crossover network and the second cover member alters the frequency response of the second sound source in a manner creating a physical crossover network.

5. The speaker assembly according to claim 1, further including a first tweeter positioned adjacent the first sound source and a second tweeter positioned adjacent the second sound source, the first tweeter and the second tweeter are outwardly mounted in opposition to generate a stereo image, wherein the first cover member alters the frequency response of the first sound source in a manner creating a physical crossover network and the second cover member alters the frequency response of the second sound source in a manner creating a physical crossover network.

6. The speaker assembly according to claim 5, wherein the first tweeter is mounted between approximately a 25° angle and approximately a 75° angle relative to the opposed open end of the speaker housing and the second tweeter is mounted between approximately a 25° angle and approximately a 75° angle relative to the opposed open end of the speaker housing.

7. The speaker assembly according to claim 1, further including a public address driver.

8. The speaker assembly according to claim 1, wherein the first sound source includes a cone having an interior surface which faces a wall of the first support housing, an exterior upper edge of the cone being directly attached to the wall of the first support housing to seal off a space defined by the interior surface of the cone of the first sound source and the wall of the first support housing, the wall of the first support housing including a port of a size substantially less than that of the cone such that the wall covers a portion of the first sound source to alter the frequency response of the first sound source; and

the second sound source includes a cone having an interior surface which faces a wall of the second support housing, an exterior upper edge of the cone being directly attached to the wall of the second support housing to seal off a space defined by the interior surface of the cone of the second sound source and the wall of the second support housing, the wall of the second support housing including a port of a size substantially less than that of the cone such that the wall covers a portion of the second sound source to alter the frequency response of the first sound source.

9. The speaker assembly according to claim 8, wherein the port of the first support housing is semi-circular and the port of the second support housing is semicircular.

10. The speaker assembly according to claim 9, wherein the upper edge of the cone of the first sound source has a radius which is centered in alignment with a radius of the semi-circular port and the upper edge of the cone of the second sound source has a radius which is centered in alignment with a radius of the semi-circular port.

11. A loudspeaker assembly, comprising:

a speaker housing having a first wall and a second wall between which is positioned a sound source;

the first wall including a port through which sound generated by the sound source is

5 directed;

a cover member covering at least a portion of the sound source to alter the resonant characteristics of the sound source, wherein the cover member is a port formed in the second wall, the port being of a size substantially less than the sound source such that the second wall covers a substantial portion of the sound source;

a tweeter positioned adjacent the sound source, the sound source and tweeter combining to create a predetermined full range of sounds;

wherein the frequency response altered by the cover member and the port creates a physical crossover network.

15 12. The speaker assembly according to claim 11, wherein the cover member further includes an acoustic sheet which covers at least a portion of the sound source.

13. The speaker assembly according to claim 12, wherein the sound source includes a cone having an interior surface which faces the second wall of the speaker housing, an exterior upper
20 edge of the cone being directly attached to the second wall of the speaker housing to seal off a space defined by the interior surface of the cone of the sound source and the second wall of the speaker housing, the port being of a size substantially less than that of the cone such that the second wall covers a portion of the sound source to alter the frequency response of the sound source.

14. The speaker assembly according to claim 13, wherein the port is semi-circular.

15. The speaker assembly according to claim 14, wherein the upper edge of the cone of the
5 sound source has a radius which is centered in alignment with a radius of the semi-circular port

16. The speaker assembly according to claim 11, wherein the sound source is a midrange driver.

17. The speaker assembly according to claim 11, wherein the port is of a size substantially less
than the sound source such that the second wall covers a substantial portion of the sound source.

18. The speaker assembly according to claim 11, wherein the sound source includes a cone
having an interior surface which faces the second wall of the speaker housing, an exterior upper
edge of the cone being directly attached to the second wall of the speaker housing to seal off a space
15 defined by the interior surface of the cone of the sound source and the second wall of the speaker
housing, the port being of a size substantially less than that of the cone such that the second wall
covers a portion of the sound source to alter the frequency response of the sound source.

19. The speaker assembly according to claim 19, wherein the port is semi-circular.

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